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Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-2 (Canceled)

3 (Currently Amended): A startup combustor according to claim 2 that is used at startup to warm a fuel reformer characterized by:

a chamber for combusting fuel;

a fuel port connected to the chamber for introducing fuel;

an air port connected to the chamber for introducing air;

an ignition source connected to the chamber for igniting fuel and air introduced thereto;

a filter within the chamber, which is capable of preventing a substantial portion of any soot contained in the air or fuel or which can develop from combusting the fuel with the ignition source from passing through the filter;

a controller for regulating the introduction of air and fuel to the chamber and capable of maintaining an excess air ratio to regenerate the filter, and

a means for detecting soot accumulation onto the filter, wherein the means for detecting the soot accumulation onto the filter comprises a differential pressure gauge.

4-6 (Canceled)

7 (Currently Amended): A startup combustor according to claim 6 further characterized by that is used at startup to warm a fuel reformer characterized by:

a chamber for combusting fuel;

a fuel port connected to the chamber for introducing fuel;

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an air port connected to the chamber for introducing air;

an ignition source connected to the chamber for igniting fuel and air introduced thereto;

a filter within the chamber, which is capable of preventing a substantial portion of any soot contained in the air or fuel or which can develop from combusting the fuel with the ignition source from passing through the filter;

a controller for regulating the introduction of air and fuel to the chamber and capable of maintaining an excess air ratio to regenerate the filter.

the startup combustor characterized by being able to predict the filter outlet temperature from the amount of soot accumulated on the filter and performing an operation that lowers the outlet temperature of the combusted gases exiting the filter; and

an inlet port downstream of the filter and before a reformer, which is capable of introducing water to the combusted gases to cool the an inlet temperature of the reformer.

8-13 (Canceled)

14 (Currently Amended): The A process of claim 13 for operating a startup combustor to regenerate a filter, the process comprising:

combining air and a hydrocarbon fuel to form an air hydrocarbon fuel mixture;

combusting the mixture to form a combustion gas that can also contain soot;

passing the combusted gas through a filter to collect any soot onto the filter;

when a predetermined amount of soot has collected on the filter, regenerating the filter by introducing an excess air ratio of about 1.5 to about 2.8 for a set period of time to oxidize the collected soot on the filter;

determining a filter outlet temperature based on a level of the soot accumulated on the filter; and

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performing an operation that lowers an outlet temperature of the combusted gases exiting the filter, wherein the operation that lowers the outlet temperature of the combusted gases exiting the filter is achieved by introducing water to the combusted gases.

15 (Canceled)

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